

REMARKS

Claims 34-66 are pending, of which claims 34, 46 and 56 are independent claims.

In the Office Action, claims 34, 37, 46, 49, 56 and 59 are rejected under 35 U.S.C. § 103(a) as being obvious based on the combination of Meurisse (US 5,959,973) and Van As (US 5,768,258). Claims 35, 36, 47, 48, 57, 58 are rejected under 35 U.S.C. § 103(a) as being obvious based on Meurisse, Van As, and Karol (US 5,675,573). These rejections are respectfully traversed.

The independent claims 34, 46 and 56 all include the features of planning a scheme change and providing a change signal indicating that the data communications device has planned the scheme change. This functionality provides an opportunity for the source node to influence whether and/or how the scheme change occurs within the node that is planning the scheme change. The essence of planning, of course, is that it precedes any scheme change.

Meurisse shows a system and method for controlling data flow rates in a network using explicit-rate signaling among nodes. As acknowledged in the Office Action, Meurisse does not disclose the changing of schemes by which packets are transferred within a node nor the signaling of any such scheme changes to upstream nodes.

Van As is seen to disclose a congestion control mechanism involving successive actions progressing from local to upstream. Specifically, a node detecting congestion on an output port immediately alters the behavior of its own input ports to hold back data traffic destined for the congested output port. In some cases this temporary local throttling of data can allow the congestion to clear, after which normal operation is resumed and no action outside the node is necessary. But if the queues at the input port start to fill up, then the node transmits a "throttle cell" to upstream nodes. The throttle cell contains a routing label identifying cells that the upstream node should refrain from transmitting in order to allow an opportunity for the congestion to clear.

In Van As, the throttle message is sent only after the congested node has already changed the manner in which data cells are transferred from the input port to the output port of the congested node. Van As is seen to show only two methods of transferring packets within the node, (1) freely transferring them when the output port is not congested, and (2) holding them at the input port (i.e., not transferring them) when the output port is congested. The congested node itself makes the decision to change from method (1) to method (2), and this change is not preceded by any sending of the throttle message. In fact, the throttle message is clearly sent only after method (2) is already being used. The throttle message is not sent based on any planning of a change from method (1) to method (2), nor for that matter based on any other planned change. The throttle message is sent only when the congested node has exhausted its own limited set of traffic-management options and now requires help from the upstream nodes to try to overcome the congested condition.

It is respectfully submitted that the combination of Meurisse and Van As cannot render the independent claims of this application obvious, because even taken together they do not teach or suggest all the elements of these claims. Specifically, this combination does not teach or suggest the combination of (a) planning a scheme change to change the initial policy scheme to a new policy scheme based on transfer conditions within the data communications device existing while transferring the packets of the particular flow based on the initial policy scheme, the new policy scheme controlling a new manner in which the packets are transferred from the input ports to the output ports of the data communications device, and (b) providing a change signal to a source of the particular packet flow, the change signal indicating that the data communications device has planned the scheme change. Meurisse does not provide any teaching regarding a scheme change or related signaling. And Van As, to the extent it describes any "scheme change", does not describe planning such a change nor transmitting any change signal that indicates that such a scheme change has been planned. In Van As, the change from freely transferring

packets to holding them at the input port is not planned, it simply happens based on congestion occurring at the output port. And the throttle message is not sent based on planning this change or even making this change, but rather only later based on the filling up of the input queues. The throttle message does not indicate that any scheme change for how packets are transferred within the congested node is planned, but only that the congested node is still experiencing congestion and now requires the upstream node to also refrain from sending certain packets to help alleviate the congestion. Thus, Van As fails to teach or suggest planning a scheme change and transmitting a change signal indicating that the scheme change has been planned. Because neither Meurisse nor Van As teaches or suggests at least these elements of the independent claims, these claims cannot be obvious under 35 U.S.C. § 103(a) based on the combination of these references.

The remaining claims incorporate the above-discussed claim features by virtue of their dependencies, and therefore are allowable over the combination of Meurisse and Van As (alone or with Karol) for at least the reasons discussed above.

Conclusion

In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this effect is respectfully requested. If the Examiner believes, after this Response, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' Representative at the number below.

Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, please charge any deficiency to Deposit Account No. 50-3661.

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If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-2900, in Westborough, Massachusetts.

Respectfully submitted,

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